DEUTSCHE
ALLIANZ
MEERESFORSCHUNG

Annual Report

2024

GREETINGS FROM THE EXECUTIVE BOARD

Dear Sir or Madam,
Dear friends of coastal, marine, and polar research,

2024 was a significant year for the DAM in many ways: After three years of successful research, the two DAM research missions CDRmare and sustainMare entered phase II, and the third mission, mareXtreme, began its work. Since fall 2024, the transfer portals "Meere Online" and " Interactive World Ocean" have been offering clear and understandable knowledge from marine research to interested parties, inviting them to immerse themselves and discover. In the area of data management and digitalization, great progress has been made in the uniform processing and linking of data collected by DAM member institutions. Numerous events and communication formats have also been used to establish and strengthen networks within and outside the scientific community. Background information and details on the DAM's activities for the sustainable management of coasts, seas, and oceans in 2024 are summarized in this report.

The DAM's commitment has also been recognized by external parties: Five years after its founding, a high-level, international commission of experts evaluated the DAM in 2024. The extremely positive evaluation result confirms the validity of our approach to date: The → *evaluation report,* published in spring 2025, recognises the DAM's pivotal role, unique in the German research landscape, as a platform for the coordination and strategic development of German marine research. By providing information and contacts both within and outside the scientific community, the DAM offers significant added value and contributes to strengthening the visibility and effectiveness of German marine research – especially at the national level, but also increasingly at the international level.

Networking both within the scientific community and with external actors from politics, business, and civil society is a prerequisite for preserving the oceans as a basis of life for future generations. Marine conservation is a joint task – and knowledge from research is the key to a more sustainable approach to coasts, seas, and oceans. Building networks has therefore been a central element of the DAM from the outset – and will remain so in the future.

We are delighted with the positive evaluation results and the decision announced in the new federal government's coalition agreement to continue the DAM, which gives us the energy for a major task: to successfully implement the strategy process to merge the DAM and the German Marine Research Consortium into a joint association for German marine research. We would like to express our sincere thanks to everyone involved – thank you very much for accompanying and supporting us on this journey!

With best regards

Joachim Harms
Chairman of the DAM Executive Board

Michael Schulz
Deputy Chairman of the DAM Executive Board

Katja Matthes
Member of the DAM Executive Board

Ulrich Bathmann
Member of the DAM Executive Board

Dr. Joachim Harms
Chairman of the
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Prof. Dr. Michael Schulz
Deputy Chairman of the
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Prof. Dr. Katja Matthes
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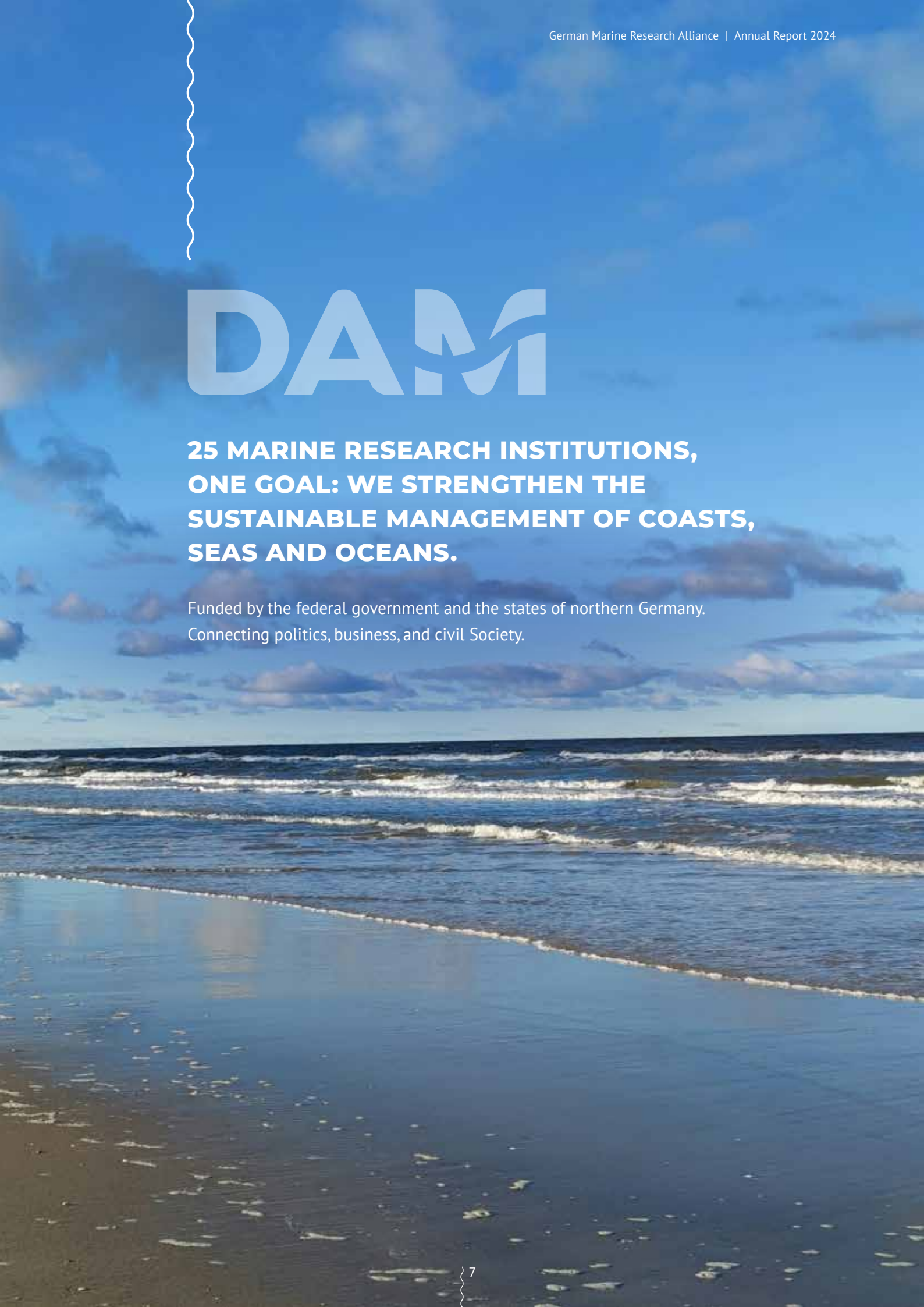


DAM

25 MARINE RESEARCH INSTITUTIONS, ONE GOAL: WE STRENGTHEN THE SUSTAINABLE MANAGEMENT OF COASTS, SEAS AND OCEANS.

Funded by the federal government and the states of northern Germany.
Connecting politics, business, and civil Society.

The German Alliance for Marine Research (DAM):

KNOWLEDGE FROM RESEARCH – FOR A MORE SUSTAINABLE APPROACH TO COASTS, SEAS, AND OCEANS

More than two-thirds of the Earth's surface is covered by water. Connected by currents, seas and oceans form the largest contiguous ecosystem in the world: a habitat for millions of species that also provides the basis for life for a growing global population. Seas and oceans also have a significant influence on the climate: by storing heat and carbon dioxide, they have so far considerably mitigated man-made climate change. But they are endangered: rising water temperatures, overuse, and pollution threaten the oceans, their climate-regulating effect, and many other functions that are important for our existence on this planet.

In order to protect and sustainably use coasts, seas, and oceans, it is crucial to better understand their complexity. German marine research, which is at a leading international position, makes a decisive contribution to this. In 2019, the federal government, represented by the Federal Ministry of Education and Research (BMBF, since May 2025 BMFTR), and the northern German states of Bremen, Hamburg, Mecklenburg-Western Pomerania, Lower Saxony, and Schleswig-Holstein, together with marine research institutions, therefore founded the German Marine Research Alliance (DAM) – one of the largest marine research alliances worldwide.

Its goal is to use the combined expertise of Germany's leading marine research institutions to develop and provide guidance and practical knowledge as a basis for political and social decisions that promote the sustainable management of coasts, seas, and oceans.

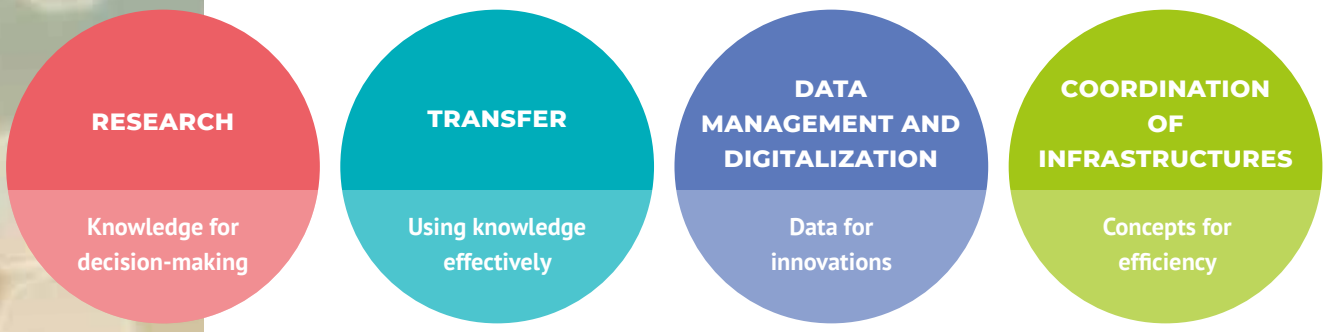
As a platform for the coordination and strategic development of German marine research, the DAM complements existing structures in the scientific system: It connects universities, non-university research institutions, and departmental research institutions and ensures the effective transfer of current research results. This is done in exchange with politics, business, and civil society, as well as in close coordination with the German Marine Research Consortium (KDM). The course for the prospective merger of both German marine research associations was set in 2024. The DAM is also participating as a network partner in the UN Decade of Ocean Science for Sustainable Development (2021 to 2030): a global campaign with the aim of jointly protecting and shaping the ocean in order to preserve it for future generations. Findings from research play a central role in this.

NETZWERKPARTNER

Network partner of the
German Committee of the UN-Ocean Decade (ODK)
2021–2030

ACTIVITIES OF THE DAM 2023

To achieve its goals, the DAM is active in four core areas:



In the reporting year, DAM made significant progress in its core areas. With 25 members at the end of the reporting year, the alliance brought together the leading German marine research institutions under one roof, further expanded its network, and established regular exchange formats – both within DAM and with marine-related stakeholders, particularly from politics and organized civil society.

The two DAM research missions CDRmare and sustainMare have each begun their second funding phase, and the third mission, mareXtreme, started as planned in early 2024.

The area of data management and digitalization has made progress, in particular with the continuation and expansion of the "Underway" research data project, which aims to improve access to and use of research data on German research vessels, and with the expansion of the central marine research data portal. Transfer and communication played a decisive role in disseminating scientific background information and decision-making knowledge to politics, business, organized civil society, and the general public.

The activities of the DAM in 2024 are summarized on the following pages.

CORE AREA RESEARCH

Addressing socially relevant issues – for science that benefits everyone.

Seas and oceans are crucial to life on our planet: they regulate a large part of the global carbon cycle and make an important contribution to climate stabilization. Coasts, seas, and oceans also play a decisive role in the economy: they provide food, supply energy, and serve as trade routes. For many people around the world, they are also important places for recreation and cultural heritage. In short, seas and oceans are essential for our survival.

Ensuring the long-term health of the seas and oceans and preserving them as the basis of life requires a comprehensive understanding of their complex ecosystems. Eighty percent of the ocean, especially the deep sea, remains unexplored. The member institutions of the DAM conduct research to close gaps in knowledge and create a basis for developing options for action for politics, business, and civil society.

To meet the challenges of protecting the seas and oceans, the DAM has initiated three research missions: Two of them – "Marine Carbon Sinks in Decarbonisation Pathways," or CDRmare for short, and "Protection and Sustainable Use of Marine Areas," or sustainMare for short – began their Phase II in 2024 after the first three years of operation. The third research mission, "Pathways to improved risk management in the area of marine extreme events and natural hazards," or mareXtreme for short, began its work at the start of the year. All three DAM research missions are funded by the Federal Ministry of Research, Technology, and Space (BMFTR) and the science ministries of the northern German states.

The DAM research missions focus on current and socially relevant challenges with the aim of developing solution knowledge for sustainable human interaction with the oceans and coastal areas. The missions are unique in their interdisciplinary and transdisciplinary approach: scientists from various disciplines and organizations work together on a central issue, while stakeholders from business, politics, administration, and organized civil society are involved at an early stage and on an ongoing basis. This solution-oriented research approach pools the resources and expertise of various institutions and interest groups and links existing activities in order to make an effective contribution to the development of strategies and measures for the protection and sustainable use of the oceans. The German government's → *MARE:N* research program serves as a guideline.

An essential element of the DAM research missions is the exchange of knowledge with politics, business, and civil society. The numerous transfer activities within the missions are supplemented by various overarching transfer and communication formats, including parliamentary events organized by the DAM. Representatives of the DAM research missions also took part in the meetings of the DAM's general assembly and stakeholder forum in 2024 to report on the status, results, and prospects of the missions.

MILESTONES IN 2024

- → Start of the 3rd DAM research mission mareXtreme
- → Start of phase II of the DAM research missions CDRmare and sustainMare
- → Promotion of dialogue and consultation by the DAM research missions on socially relevant topics, especially in the political environment

ACTIVITIES IN THE CORE AREA OF RESEARCH 2024

FIRST DAM RESEARCH MISSION:

CDRMARE – MARINE CARBON SINKS IN DECARBONISATION PATHWAYS

In the research mission → *CDRmare,* scientists are working with politicians, business leaders, and civil society to investigate whether and to what extent the ocean can play a role in the removal (carbon dioxide removal, CDR) and storage (carbon capture and storage, CCS) of carbon dioxide (CO_2) from the atmosphere. In order to mitigate the increasingly drastic consequences of man-made climate change and achieve the climate targets adopted in the Paris Agreement, it will be necessary not only to massively reduce CO_2 emissions but also to remove CO_2 from the atmosphere in order to offset unavoidable emissions. The researchers are focusing on the interactions with and impacts on the marine environment, the Earth system, and society, and are considering approaches for monitoring, attributing, and accounting for marine carbon storage in a changing environment.

On August 1, 2024, the second funding phase of the mission began – with five research projects and around 140 scientists. One of the new features is the establishment of an integrative "Social Sciences and Humanities Hub" for even more interdisciplinary work on overarching humanities and social science questions relating to marine CDR and CCS.

The Federal Ministry of Research, Technology, and Space (BMFTR) and the science departments of the five northern German states are providing around 20 million euros for phase II.

In preparation for Phase II, among other things, more than 230 researchers from CDRmare and CDRterra (BMFTR research program on land-based CO_2 removal methods) met in March 2024 to present and discuss the results of their ongoing scientific work on the feasibility, potential, and risks of methods for removing carbon dioxide from the atmosphere. Experts from both research programs also answered questions from interested citizens during an informative evening event on underground CO_2 storage.

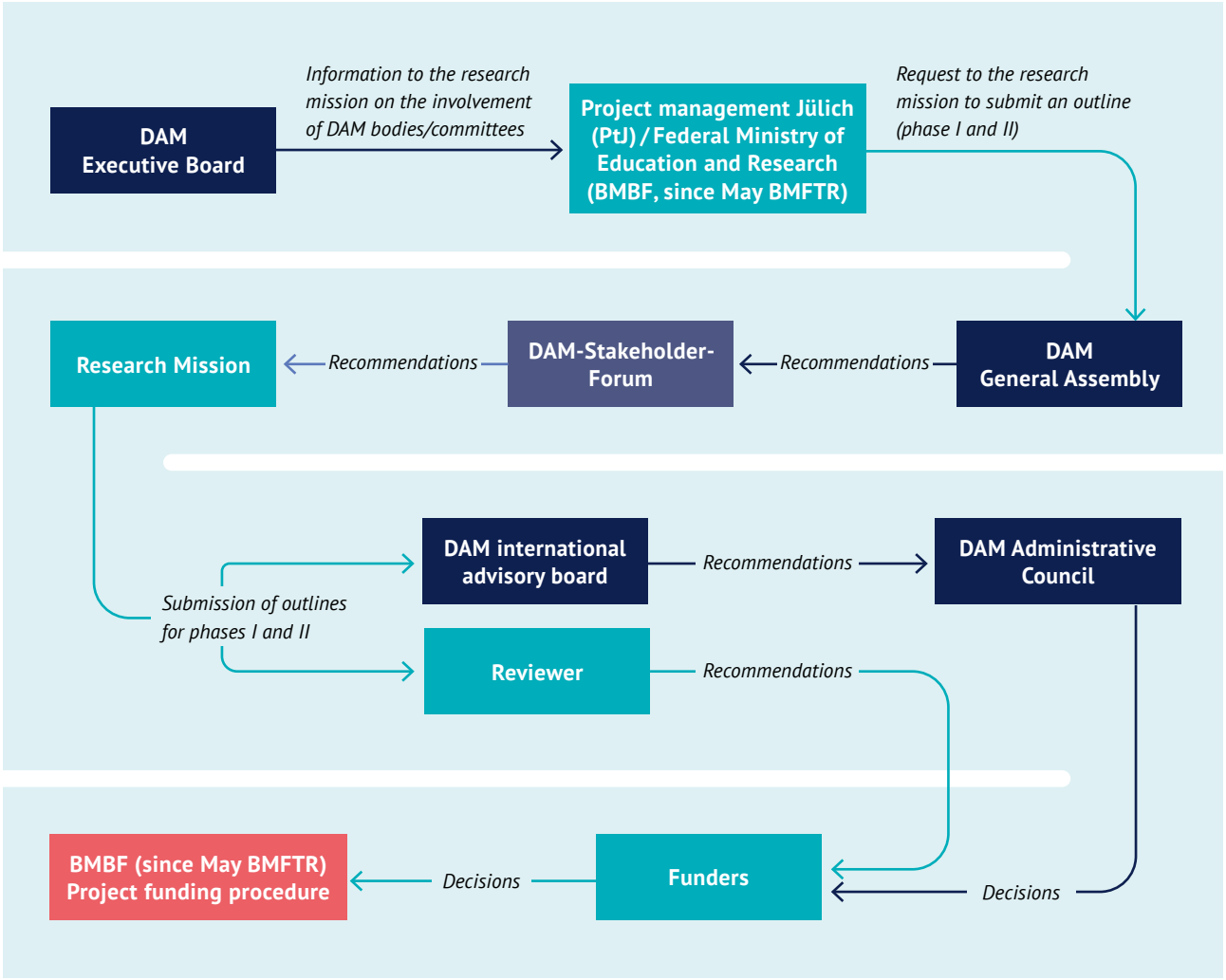
CDRmare experts presented their initial research results in May 2024 at the Marine Environment Symposium in Hamburg. In July, researchers from CDRmare and CDRterra also presented to around 50 participants from politics and practical fields at the evening event "Focus on Climate Protection" in Berlin how long-term measures for CO_2 removal and storage on land and at sea can contribute to climate neutrality.

CDRmare also provided insights into its research and findings throughout the reporting period with fact sheets, "Insights," and "Science Stories" on the → *CDRmare website* and via social media channels.

SIGNIFICANT CONTRIBUTIONS OF DAM RESEARCH MISSIONS TO THE DIALOGUE ON SOCIETALLY RELEVANT TOPICS

- → Comprehensive, transdisciplinary assessment framework for marine CO_2 removal (mCDR) methods
- → Intensive involvement in the design of political strategies on CDR and CCS (carbon management strategy/long-term negative emissions strategy) and related legal adjustments (CO_2 Storage Act, High Seas Emission Act)

REVIEW PROCESS FOR A POSSIBLE PHASE II OF THE DAM RESEARCH MISSIONS



SECOND DAM RESEARCH MISSION:

SUSTAINMARE – PROTECTION AND SUSTAINABLE USE OF MARINE AREAS

The focus of the second DAM research mission → *sustainMare* is on the protection and sustainable use of marine areas. This is because pressure on the oceans is increasing. The steadily growing use of marine resources – for food, raw materials, and energy, as a means of transport, and as a place for human life and recreation – is placing considerable strain on coasts and oceans. Underwater noise, pollution, damage to the seabed, and changes in natural currents are affecting ecosystems and living organisms. Added to this is human-made climate change, with rising temperatures and increasingly extreme weather conditions. How will these pressures develop and interact with each other? And how will the sea respond? The DAM research mission sustainMare aims to find answers to these questions and identify options for action.

In 2024, the third project year of sustainMare was dominated by preparations for phase II of the research mission. An important part of the preparation activities was the annual mission meeting in September, where around 120 researchers and stakeholders gathered in Hamburg to present their work and exchange ideas and network with a view to future cross-mission cooperation in the second funding period of the mission. On December 1, the mission entered Phase II with seven projects and around 200 scientists. The BMBFTR and the science departments of the five northern German states are providing around 19 million euros for the second phase of the mission.

During the reporting period, sustainMare provided insights into its research topics and activities with fact sheets, videos, applications, and other documents, which are available to interested parties on the → *mission website* As in previous years, sustainMare also offered the online lecture series "Protection and Sustainable Use of Our Seas and Coastal Regions" in cooperation with the University of Hamburg in the 2024 summer semester. Recordings of the lecture series are available → *online*.

The DAM research mission was actively involved in the information day marking the launch of the urgent program "Munitionsbergung in Nord- und Ostsee" (Munitions Recovery in the North Sea and Baltic Sea), which took place on June 24 at GEOMAR in Kiel and brought together representatives of all key stakeholders (from science, politics, business, civil society, the navy, and the federal police) for the first time.

SIGNIFICANT CONTRIBUTIONS OF DAM RESEARCH MISSIONS TO THE DIALOGUE ON SOCIETALLY RELEVANT TOPICS

- → Support for the German government's urgent program for munitions recovery in the North Sea and Baltic Sea
- → Fishermen as "sea rangers" (environmental monitoring, tourism)
- → Advising the Bundestag/EU Commission on the impact of offshore wind farms on ecology/fisheries

THIRD DAM RESEARCH MISSION:

MAREXTREME – PATHWAYS TO IMPROVED RISK MANAGEMENT IN THE AREA OF MARINE EXTREME EVENTS AND NATURAL HAZARDS

On January 1, 2024, the third DAM research mission, "Pathways to improved risk management in the area of marine extreme events and natural hazards," or → *mareXtreme*, for short, began its work. Like the first two DAM research missions, this mission is funded by the German federal government, represented by the Federal Ministry of Research, Technology, and Space (BMFTR, known as the Federal Ministry of Education and Research, BMBF, at the start of the funding period), and the science departments of the five northern German states. Until the end of 2027, around 150 scientists from 29 partner organizations will be researching the interactions between short-term multiple and cascading extreme events and natural hazards, as well as their long-term effects on marine ecosystems and social life on the coast, in the four joint projects ElbeXtreme, METAscales, MULTI-MAREX, and PrimePrevention. The mareXtreme mission thus addresses highly topical research topics that are relevant to society.

As in all DAM research missions, researchers from various disciplines are working closely with stakeholders from politics, business, and civil society from the outset. The aim is to develop and expand socially reflective, solution-oriented practical knowledge, thereby enabling science-based decisions in dealing with marine extreme events and natural hazards.

Following internal kick-offs in the collaborative projects, representatives of all four collaborative projects met in Bremen from September 4 to 6, 2024, for a joint mission kick-off to further network, explore common ground, and create synergies – both for their research and for overarching topics such as transfer/communication and data management.

mareXtreme provides information and initial insights into the research and results of the mission on its → *website*. In addition, the mission made decisive contributions to the dialogue on socially relevant topics in its first year of operation.

SIGNIFICANT CONTRIBUTIONS OF DAM RESEARCH MISSIONS TO THE DIALOGUE ON SOCIETALLY RELEVANT TOPICS

→ Development of building blocks for effective disaster prevention for marine hazards in seismically active areas in Greece (to advise decision-makers)

CORE AREA OF DATA MANAGEMENT AND DIGITALISATION

Collecting, pooling and sharing data – for research that benefits everyone.

Marine research generates huge amounts of data every year: long-term observation systems on and below the water surface, underwater robots, observatories, and research vessels measure and record numerous parameters. This database is of enormous value, as surveys at sea involve considerable technical and logistical effort and the data form a central basis for understanding long-term changes in marine ecosystems. However, its full potential has not yet been exploited, as there is still room for structural improvement in terms of access and further use.

The DAM aims to create standards and processes in the core area of data management and digitization that enable actors from the scientific community and beyond to have open and uniform access to decentralized data sets and their (re)use. The aim is to promote innovation through the adoption of Open Science principles. The FAIR principles serve as the basis for this. According to these principles, research data should be …

- findable using common search tools
- accessible so that the data and metadata can be analyzed
- interoperable so that comparable data can be analyzed and integrated using a common vocabulary and common formats
- reusable by other researchers or the public.

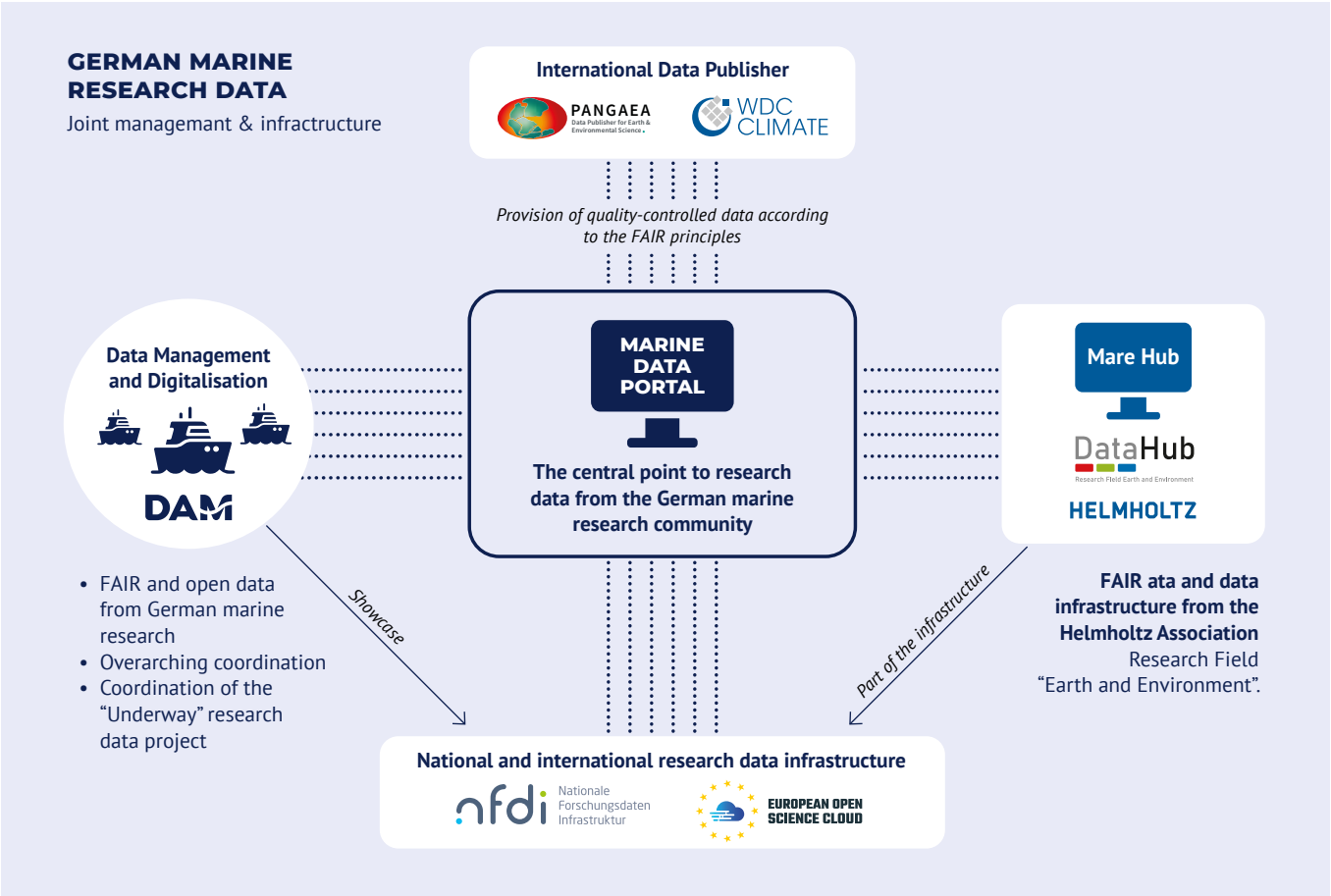
Since 2019, the DAM has been working with its member institutions to establish a data ecosystem for German marine research in which stakeholders produce, offer, find, reuse, process, archive, and publish data. >

MILESTONES 2024

- *Expansion and optimization of the marinedata portal → marine-data.de*
- *Phase II of the "Underway" research data project: Focus on regional research vessels / Participation in a pilot study to map seamounts on transit routes*
- *Improved provision of sensor and expedition metadata through advances in the joint use of the O2A Registry and OSIS systems operated by AWI and GEOMAR*
- *Start of the second round of the two-year NFDI4Earth Academy program for young researchers*

Based on this system, the DAM's Data Management and Digitalisation Working Group has developed proposals for future areas of action in the period from 2026 to 2030 to optimise data management and digitalisation in German marine research. The document is to be understood as a building block on the way to a comprehensive data strategy for German marine research. It supplements and builds on the DAM research data guideline and the data management concept for German marine research. In terms of content, the areas of action include the systematic expansion of data flows, the strengthening of international cooperation, the improvement of real-time data transmission, the establishment of interim data rooms, the increased use of the PANGAEA research data portal for the publication of FAIR data, and the promotion of data science and modern analysis methods. The formal coordination process is scheduled to be completed in 2025 and will form the basis for further strategic implementation.

The data ecosystem of German marine research is based on two initiatives: the DataHub of the Helmholtz Research Field Earth and Environment and the DAM core area Data Management and Digitalisation. Both work together in a complementary and coordinated manner. The DataHub harmonises data management across all Helmholtz Centres in the Research Field Earth and Environment and enables the implementation of the FAIR principles. Existing infrastructures are being merged into a distributed data space. Most of the data infrastructures are available for use by DAM member institutions. In November 2024, the DataHub received a very positive evaluation from an independent, external and international commission, which favours the possible continuation of the DataHub initiative.



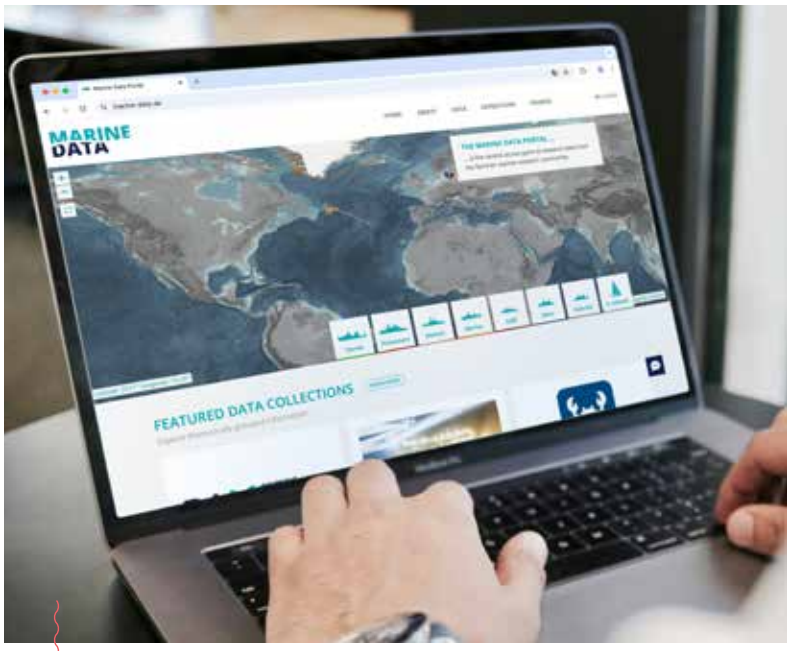
ACTIVITIES IN THE CORE AREA OF DATA MANAGEMENT AND DIGITALISATION

IMPLEMENTATION OF THE RESEARCH DATA MANAGEMENT CONCEPT

In order to pave the way for a uniform and FAIR-oriented approach to research data management that is in line with the objectives of the → *National Research Data Infrastructure* (NFDI), in 2023 the DAM published the → *research data management concept for German marine research* developed by the Data Management and Digitalisation Working Group, a joint concept for a collaborative data ecosystem for German marine research. Institutional sovereignty in the handling of data is retained, while processes and minimum standards are uniformised.

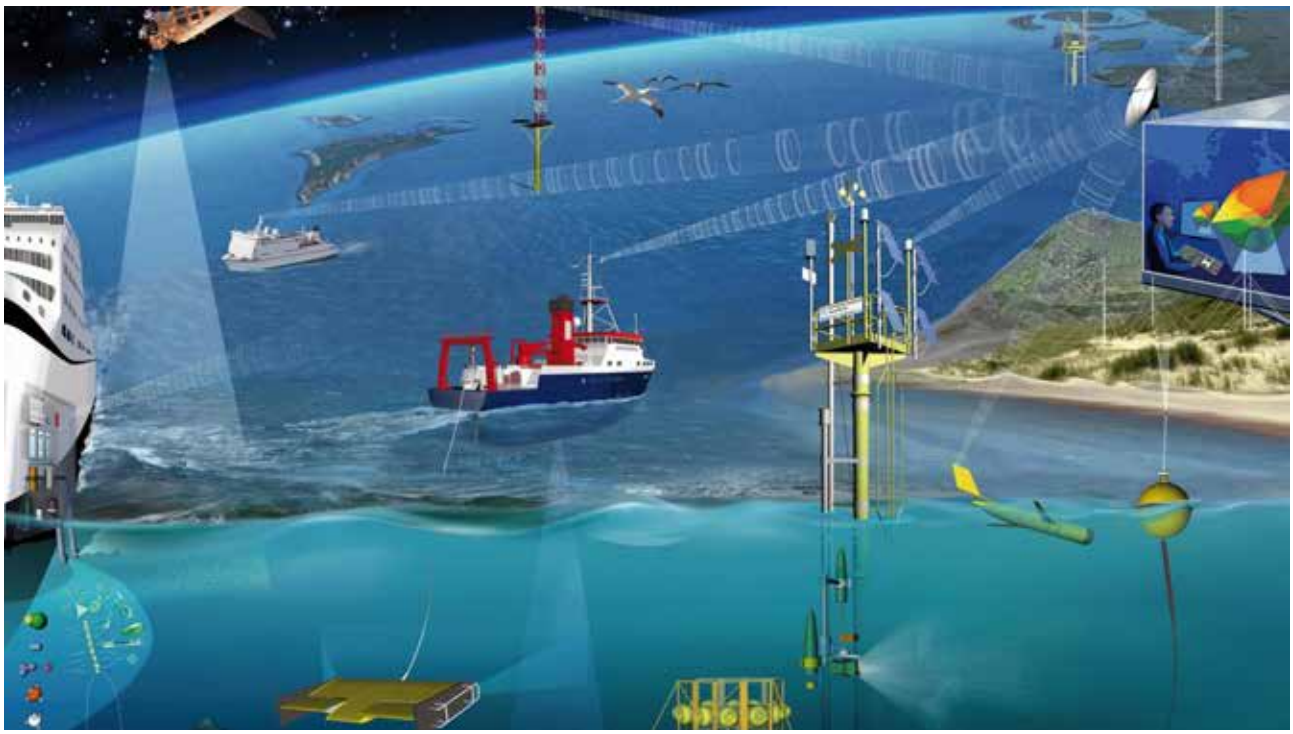
The implementation of the measures outlined in the research data management concept for the shared use of existing data infrastructures continued to progress during the reporting period:

1. Since mid-2024, the central marine research data portal → *marine-data.de* has also been providing centralised access to decentralised data from German marine research, including official data from the Federal Waterways Engineering and Research Institute (BAW), the Federal Institute for Geosciences and Natural Resources (BGR) and the Federal Maritime and Hydrographic Agency (BSH). Optimised visualisation of (meta) data facilitates the search for and access to marine research data. Specifically, the German Marine Research data portal enables users to visualise, search and retrieve scientific data from interdisciplinary research collaborations and individual research initiatives. In addition to integrating individual data sets, it promotes the aggregation and visualisation of curated data products and standardised web-based data services for reuse via so-called thematic viewers. If required, and in close cooperation with a scientific community that wishes to visualise data on a specific topic in Web Map Services, additional thematic viewers can be implemented.



The central data portal for German marine research, marine-data.de, pools data collected by various research institutions and makes it available to scientists for their own research.

2. In user workshops led by BSH employees and conducted on behalf of DAM, the requirements of other DAM member institutions for the 'Registry' sensor management platform operated by the Alfred Wegener Institute (AWI) were identified in the course of 2024. These requirements have since been taken into account in the further development of the platform. By sharing the 'Registry' infrastructure, DAM member institutions save themselves the time-consuming and costly development of a sensor management system, which is necessary for the provision of FAIR data.
3. The Ocean Science Information System (OSIS) operated by GEOMAR was further developed with partners in the "Underway" research data project in order to store expedition data centrally and in a machine-readable format in future.



PROJECT ‘UNDERWAY’ RESEARCH DATA

With the ‚Underway’ research data project, the DAM has been networking the data management activities of its shipping member institutions since 2019. Permanently installed sensors on board the research vessels collect valuable data on the way to the research area, which for a long time was not systematically checked for quality and made visible in the Marine Data Portal. The data collected as part of this project is connected internationally on a prototype basis and made visible in the Marine Data Portal. The aim of the project is to exploit the full potential of German research vessels as mobile measurement platforms and to make the data accessible in accordance with the FAIR principles.

In the reporting year, the second year of the second approval phase (2023–2025), a concept for harmonising the data infrastructure on board the regional research vessels (ALKOR, ATAIR, ELISABETH-MANN-BORGESE, HEINCKE) was completed and the infrastructure necessary for implementation was procured. The infrastructure will be commissioned in 2025.

Building on existing structures and in close cooperation with leading German marine research institutions and the DataHub initiative of the Helmholtz Research Field Earth and Environment, the data experts developed a uniform publication standard for collected marine seismic data. As part of this process, they worked on a ‘Marine Seismic Compilation Viewer’ for the Marine Data Portal, which will enable the metadata visualisation of seismic data published in the PANGAEA data repository. The aim is to provide researchers with a powerful tool for accessing and analysing nationally collected seismic data.

At the annual meeting of the ‘Underway’ research data project in May, participants reflected on the status of the project, presented cross-institutional progress in the provision of FAIR research data, and discussed concrete measures for further improving the data infrastructure. The focus was on preparing for a further necessary continuation phase of the project. In addition, the participants drafted an application to participate in a pilot study for the targeted mapping of seamounts on transit routes.

SECOND ROUND OF THE NFDI4EARTH ACADEMY

In order to train and support early career scientists in the field of data science, the Geo.X – The Research Network for Geosciences in Berlin and Potsdam and the DAM have launched the → *NFDI4Earth Academy* in close collaboration with the Geoverbund ABC/J – Geoscientific network of the Aachen-Bonn-Cologne-Jülich research region. The NFDI4Earth Academy is part of the → *NFDI4Earth*, which aims to make constructive use of digital transformation in Earth system sciences.

As a partner of the NFDI4Earth Academy, the DAM participated in the selection process for and coordination of the second cohort of early careers researchers and the data science programme in 2024. In June, a total of 34 (post-) doctoral researchers in earth system and data sciences from 23 institutions began the two-year qualification programme. The NFDI4Earth Academy curriculum includes seminars, workshops and schools, the content of which is developed together with the fellows in line with their needs. The programme is supplemented by networking formats to connect doctoral and postdoctoral researchers and promote interdisciplinary collaboration at early career stages. The aim is to provide participants with practical knowledge of modern data science methods so that they can tackle ecological challenges in Earth system science in an informed manner.

Introduction to the field of 'data science': During their training, the fellows of the NFDDI4 Earth Academy acquire needs-based knowledge about data collection and analysis.

CORE AREA COORDINATION OF INFRASTRUCTURES

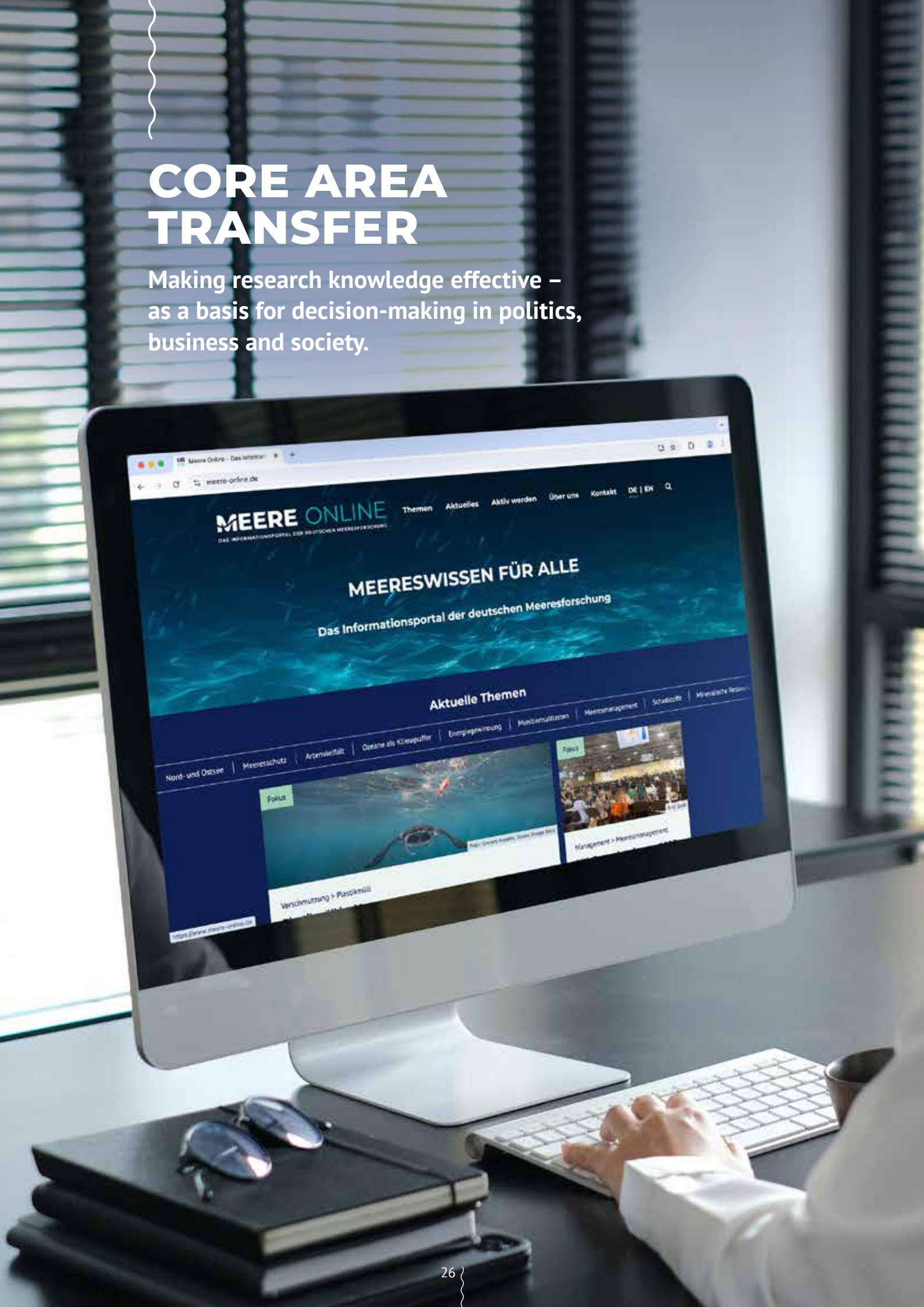
Coordinating research equipment and technology for science – for efficient, interdisciplinary research.

German marine research has unique and cost-intensive research infrastructures at its disposal, including research stations, ships, underwater vehicles, observatories and aircraft. These infrastructures form the basis for advanced scientific work and make a significant contribution to the global understanding of the oceans. However, access to these infrastructures is unevenly distributed within the German marine research landscape. In order to achieve efficient utilisation of large seagoing equipment and optimal benefits for all DAM member institutions, the DAM core area of infrastructure coordination has developed a utilisation and operating concept for large seagoing equipment. Optimal use and efficient operation of the infrastructures are of central importance in order to increase research efficiency and promote interdisciplinary cooperation and knowledge exchange between the various institutions. Both strengthen the position of German marine research nationally and internationally and contribute to solving global challenges in the field of marine sciences.

In recent years, the DAM has also supported the Science Council in updating its recommendations to the Federal Ministry of Education and Research on the development and overall concept of the German marine research fleet. In its recommendations, updated in October 2023, the Science Council addressed the utilisation and operating concept for large seagoing equipment presented by the DAM and emphasised that the reimbursement of costs for the use and operation of such large equipment should be reorganised in order to ensure equal access for researchers regardless of their institution of origin. The aim is to increase efficiency and transparency in the use of these infra-structures. Further discussions between the Federal Ministry of Research, Technology and Space (BMFTR) and the DAM are planned, but were still pending at the end of the reporting period.

CORE AREA TRANSFER

Making research knowledge effective – as a basis for decision-making in politics, business and society.



The transfer of scientific knowledge is a central element of the DAM's work to promote the sustainable management of coasts, seas and oceans: the DAM pools the expertise of German marine research and ensures a targeted and needs-oriented exchange of knowledge with decision-makers in politics, business and organised civil society – as a basis for sound decisions and concepts for the protection and sustainable use of marine systems. In addition to communicating information from the scientific community, dialogue with various social actors is particularly important in order to apply scientific findings in appropriate formats. Transfer is a cross-cutting task with interfaces to the core areas of research, data management and digitalisation at the DAM. As the objectives and target groups of the DAM's core area of transfer and its science communication department overlap, the two departments work in close coordination. Particularly in the field of science policy, the measures taken by both departments build on each other and are interlinked (see also the chapter on communication, page 32 f.).

The transformation towards greater protection and sustainable use of the oceans can only succeed if there is broad social consensus. In addition to the actual exchange of knowledge with stakeholders from politics, business and civil society, the DAM therefore develops and uses – in cooperation with education and network partners – various information and participation formats that offer all interested parties access to and an overview of socially relevant marine topics, provide food for thought on sustainable action and create opportunities for participation. In the reporting year, the DAM organised or participated in various events for this purpose. In addition, the two transfer portals 'Interactive World Ocean' and 'Oceans Online', which were developed in close cooperation with DAM members, were published in autumn 2024. Both transfer portals were officially recognised as projects of the International → *Decade of Ocean Science for Sustainable Development (2021 to 2030) during the reporting period. Their goal is to implement the UN Sustainable Development Goals through politics, society and science – specifically Sustainable Development Goal 14, 'Life below water'. Since 2022, the DAM has been a network partner of the German Ocean Decade Committee (ODK), which is committed to implementing the Decade goals in Germany.*

MILESTONES 2024

- → *Publication of the transfer portals 'Interactive World Ocean' and 'Information Portal Ocean Online'*
- → *Contribution of research knowledge / use of political events to promote dialogue*
- → Participation in formats and events within the framework of the UN Decade of Ocean Science for Sustainable Development
- → Targeted measures to promote young scientists.

ACTIVITIES IN THE CORE AREA OF TRANSFER

KNOWLEDGE TRANSFER WORKING GROUP

The DAM office works together with DAM member institutions to develop concepts and measures for the transfer of knowledge to and within politics, business and society. An important interface in this regard is the Knowledge Transfer Working Group, in which those responsible for transfer at DAM member institutions regularly exchange ideas and collaborate.

The strategic focus in the reporting year was on coordinating and finalising the content of the DAM's transfer products and the added value they offer in synergy with and in addition to the transfer activities of the DAM member institutions and the DAM research missions. In the reporting year, the members of the working group met twice online, and an informal exchange took place on occasion. Participation in formats and events within the framework of the UN Decade of Ocean Science for Sustainable Development targeted measures to promote young scientists.

'OCEAN ONLINE' AND 'INTERACTIVE WORLD OCEAN'

The DAM transfer portals → *Ocean Online* and → *Interactive World Ocean* are key measures taken by the DAM to raise and deepen awareness of the importance of the ocean as the basis for our life on Earth: Designed for different target groups, both portals bring together research findings from DAM member institutions (see page 43) across the entire spectrum of marine research and related disciplines and communicate them in a comprehensible, well-founded and entertaining way. The aim of this digital knowledge transfer by the DAM is to strengthen the social relevance of German marine research and make it more visible.

The digital information portal 'Meere Online' (Ocean Online) at → *meere-online.de* summarises expert knowledge on socially relevant marine topics in a clear and understandable way and provides links to further information from DAM member institutions. The portal is aimed at decision-makers from politics, business and civil society, as well as anyone interested in learning more about topics such as oceans and climate, ecosystem services, uses and sustainability goals. In line with the DAM's mission statement, the focus is on the sustainable management of coasts, seas and oceans. An AI-supported semantic search function developed in cooperation with the German Research Centre for Artificial Intelligence (DFKI) helps users find the content they need

quickly and easily. In cooperation with the Information Service Science (idw), the latest news from marine research institutions is provided.

The Interactive World Ocean is a touchscreen-based ocean map for use in schools, educational institutions and exhibitions. The map invites users to discover the diversity of coasts, seas and oceans, immerse themselves in different regions of the world and understand how they are connected. Users can navigate easily and intuitively by touching the screen. Immersion points open up a view of the underwater world – from river and coastal systems to the open ocean and the deep sea, from the tropics to the polar regions. The World Ocean is explored through research videos, image galleries, satellite images and data visualisations. The project is being realised by the DAM in cooperation with the German Aerospace Centre. The Interactive World Ocean is available free of charge for educational purposes. The application is suitable for tablets, touchscreens, smartboards and large-format touch tables. The map is available online at → *weltozean.de*.

During the reporting period, both transfer portals were implemented as planned: coordinated by the Knowledge Transfer Working Group (see page 28), comprehensive text, image and video content from DAM member institutions was integrated during the first half of 2024. This was followed by test rounds in which future users thoroughly tested the beta versions of both portals. At the end of April, both projects were presented to a wider audience at the Long Night of Museums in Hamburg and at the international marine film festival CINEMARE in Kiel, and discussed in a workshop with multipliers from the education sector. The results of the test phase were then incorporated into the further development of the content and technical infrastructure.

At the same time, the DAM transfer portals were registered as official projects of the UN Decade of Ocean Science (see page 31) in August. Since autumn 2024, Ocean Online and the Interactive World Ocean have been available for use by all interested parties: the official launch took place on October 21st during a parliamentary evening that coincided with the finalization of both portals (see page 36).

ZUKUNFTSBOX MEERE

'What will our seas look like tomorrow? How do we want to live with the seas? How can we treat our coasts, seas and oceans in such a sustainable way that we secure our natural resources and shape a desirable future for our blue planet?' These and other questions are posed by the → *Future Box Seas*: an interactive educational format developed by the DAM and Futurium Berlin that invites visitors to take a playful look at the future of the sea – with the aim of giving anyone interested access to issues relating to the coasts, seas and oceans, to sharpen their awareness of interrelationships and to stimulate solution-oriented thinking for a sustainable approach to the 'blue world'.

The Future Box Oceans is registered as an official activity of the UN Decade of Ocean Science for Sustainable Development and has been available to interested educational institutions since the end of 2023, both digitally and as a ready-made box with a set of cards. The box is designed to help teachers incorporate future-oriented methods and content on the topic of oceans into their lessons on a long-term basis. Due to high demand, a second edition was produced in the reporting year and sent out on request.

ACTIVITIES IN THE CORE AREA OF TRANSFER

POLITICAL DIALOGUE FORMATS

In accordance with its mandate under the administrative agreement and statutes, the DAM specifically addresses marine (research) issues at federal and state level. The aim is to provide decision-makers in the legislative and executive branches of the federal government and the northern German states with relevant practical knowledge on current issues and to create opportunities for dialogue – as a basis for sound, science-based decisions. This requires topic- and goal-oriented networking, which the DAM promotes primarily through events for political actors in ministries and parliaments. The Stakeholder Forum (see page 47) also plays an important role in dialogue and knowledge exchange with politics, business and civil society organisations.

In 2024, the DAM held three parliamentary events: Two parliamentary evenings in the northern German states of Schleswig-Holstein and Bremen (see page 36) and a political dialogue format at federal level on the topic of 'Ammunition in the sea – science, pilot salvage and beyond?', hosted by the DAM, the DAM research mission sustainMare and NABU on November 26. The aim of the latter was to present current research findings and discuss prospects for the sustainable, large-scale removal of munitions contamination in the waters of the German North Sea and Baltic Sea. The high-ranking political line-up with representatives from the BMBF (since May 2025 BMFTR) and the BMWK (since May 2025 BMWE) reflected the high importance of the topic in federal politics. The DAM research mission sustainMare presented the results of a pilot recovery project in the Bay of Lübeck, which was implemented as part of the German government's urgent action programme under the leadership of the BMUV (since May 2025 BMUKN). In the subsequent cross-party panel discussion, it became clear that munitions clearance is a long-term, interdisciplinary task. Sustainable financing, appropriate infrastructure – such as a disposal platform – and European cooperation are key success factors. The economic potential of German clearance technologies for export was also emphasised.

In addition to the parliamentary events organised by the DAM itself, DAM representatives contributed ideas and content to various (international) political events, including the closing event of the joint project 'Anthropogenic influences on the cycle of particulate organic carbon in the North Sea' (APOC), at which DAM Transfer Manager Ute Wilhelmsen outlined the perspective of marine research, and a joint event organised by the BMUV (since May 2025 BMUKN) and the German Offshore Wind Energy Association on the environmentally compatible expansion of offshore wind energy in June, at which representatives of the DAM and its member institutions contributed their research findings and project ideas.

PARLIAMENTARY GROUP ON MARITIME POLICY

An important step for marine conservation in Germany was the establishment of the cross-party and cross-departmental Parliamentary Group on Marine Policy in the German Bundestag in 2024, an exchange forum for politics, science, business and civil society. Representatives of the DAM and various DAM member institutions contributed scientific ideas and findings on the protection and sustainable use of the oceans, particularly in Germany. The kick-off event in March focused on the challenges for effective marine conservation

in the North Sea and Baltic Sea, especially in view of increasing pressure from the energy and fishing industries. Representatives from associations, science and industry joined members of parliament to discuss ways of achieving sustainable marine use. The second meeting in September was devoted to specific conflicts of use and environmental pollution, for example from offshore wind energy, CCS, oil and gas infrastructure and munitions contamination. Scientific input included the threat posed by old munitions in the German exclusive economic zone (EEZ).

PARTICIPATION IN THE UN DECADE OF OCEAN SCIENCE

The United Nations has declared the years 2021 to 2030 the International → *Decade of Ocean Science for Sustainable Development*. Politicians, society and scientists are to work together to successfully implement the → *UN Sustainable Development Goals,* with a focus on Sustainable Development Goal 14, 'Life below water'. The aim of the UN Decade is to implement transformative solutions for the protection and sustainable use of the ocean across disciplines and countries.

The DAM is a network partner of the German Ocean Decade Committee (ODK), which is committed to implementing internationally set tasks and goals in Germany. As in previous years, the DAM provided human resources for administrative tasks and public relations activities during the reporting period to support the UN Ocean Decade Committee: Among other things, the DAM participated in the ODK working groups on politics, education, culture and society. In January 2024, Ute Wilhelmsen, head of the DAM's core area of transfer, was also appointed as one of four members of the ODK's honorary board. She also heads the working group on education and society, which aims to encourage young people to treat the sea sustainably through cooperation with schools.

PROMOTING YOUNG SCIENTISTS

As another important pillar of its transfer activities, the DAM continued to promote young marine scientists in 2024. In addition to providing a thematic overview of training and doctoral programmes offered by DAM members on the DAM website, the DAM supported two conferences for young marine researchers: the Conference for Young Marine Researchers YOUMARES in May in Hamburg and the International Conference for Young Marine Researchers (ICYMARE) in September in Oldenburg, which offers young marine researchers from all over the world a forum for exchange and networking. In addition to providing substantial support for the organisation of both conferences, the DAM contributed to the ICYMARE programme with a presentation on data management and digitalisation in German marine research.

COMMUNICATION AND DIALOG

Promoting internal and external exchange and networking – as a basis for a more sustainable approach to coasts, seas and oceans.

Disseminating knowledge from marine research, raising awareness of scientific findings, creating and deepening opportunities for dialogue – communication supports all areas of work and core activities at the DAM as a cross-cutting function. The aim is to inform decision-makers and interested parties from politics, organised civil society, business and other individuals interested in science about the activities, developments and topics of German marine research and the association itself, and to encourage networking and exchange. The topics, needs and knowledge gaps that emerge in dialogue with the target groups are in turn incorporated into the research work as questions. This results in practical knowledge tailored to societal needs as a response to socially relevant questions for which there are (as yet) no answers.

The DAM uses a wide range of communication and exchange formats to bring research topics and content closer to its target groups. These include online and electronic publications and channels such as the DAM website, newsletters and social media presences, as well as printed publications such as the information flyer and this annual report. Events in the science policy environment also help to stimulate discussion and deepen contacts. The interfaces with the core area of transfer are fluid: the activities of the two areas differ primarily in the depth of the scientific information provided.

In addition, communication acts as a mouthpiece within the DAM to promote networking and cooperation with and among DAM member institutions and committees. The aim here is to create synergies, open up new perspectives and encourage cooperation – thereby pooling the expertise and strengths of the individual institutions in the best possible way in the interests of a more sustainable approach to coasts, seas and oceans.

MILESTONES 2024

- → Disseminating information and promoting dialogue with social and political actors, particularly through parliamentary events.
- → Contributing research knowledge to events with public impact.
- → Expanding the DAM's social media activities.
- → Expanding the DAM website as an information platform

ACTIVITIES IN COMMUNICATION AND DIALOG

PUBLIC RELATIONS

The central element of the DAM's public relations work is the DAM website → *allianz-meeresforschung.de*. Decision-makers from politics, business and civil society, media representatives and anyone with a general interest in the DAM's topics will find a collection of information and documents on the DAM's goals, topics, activities and structure here. In addition, the portal bundles and links current news items on research projects and activities of DAM member institutions. This gives visitors a low-threshold overview of the contribution of German marine research to the sustainable management and use of coasts, seas and oceans.

From January to December 2024, the DAM shared over 300 announcements from its member institutions on its website. It also published 18 announcements of its own, for example on new (committee) members, progress in core areas and DAM research missions, and various event formats.

Public relations work in 2024 was supplemented by two issues of the digital newsletter 'MeerNews', which can be subscribed to via the homepage www.allianz-meeresforschung.de. It delivered the latest developments and activities of the DAM to the email inboxes of around 900 subscribers. DAM member institutions also received two issues of the internal newsletter, which provided detailed information about the activities of the Executive Board, organs and committees, and the administrative office. The DAM also produced the 2023 Annual Report as a review and summary of the previous year's activities.

With a contribution to the podcast → *Technik und Meer* (Technology and the Sea) by the Society for Maritime Technology (GMT), a member of the DAM stakeholder forum, the DAM used another format to highlight the importance of marine research in Germany for a more sustainable approach to coasts, seas and oceans. The DAM Chairman and spokespersons for the DAM research missions presented the activities and goals of the DAM in general and highlighted the DAM research missions as examples of successful interdisciplinary and transdisciplinary networked research – and in this context explained the urgency of preserving the oceans as the basis of life for us all. This was the first time that the three DAM research missions appeared together.

PUBLIC RELATIONS WORKING GROUP

The Public Relations Working Group has established itself as a productive networking and exchange format at the working level, in which the communications managers of the member institutions of DAM and KDM (German Marine Research Consortium, see page 41) regularly coordinate topics and activities related to communications work and plan networked measures – in some cases overlapping with the Knowledge Transfer Working Group (see page 28).

In 2024, the working group met online in April. Key topics included the results of the DAM and KDM strategy day (see page 41) and, building on this, the perspectives of the working group, cooperation with the German Ocean Decade Committee (ODK) and the integration of activities into the UN Decade of Ocean Science for Sustainable Development (2021 to 2030) in Germany, as well as activities on social media, in particular the presence on X, formerly Twitter (see following section). In addition, informal discussions and consultations took place among the working group members during the course of the year, particularly regarding the working group's perspective and self-conception in the context of the planned merger of the two German marine research associations.

SOCIAL MEDIA

In order to expand its communication reach and promote networking and exchange with politicians and stakeholders as well as within the scientific community, the DAM further expanded its activities on the social media channels → *Linkedin*, → *Bluesky* and → *Mastodon* in 2024. In September 2024, DAM also set up a profile on → *Instagram* o further expand its network to include private individuals interested in marine issues. On all these channels, the DAM prepares information about its own activities and events and also shares posts and events from its member institutions in order to increase its reach and give interested users an overview of the status and activities of German marine research. LinkedIn in particular was well received: by the end of December 2024, around 2,800 people had connected with the DAM on this platform.

In order to showcase the diversity and range of German marine research, the DAM also launched the social media series #MeerForschung in mid-September: As part of this campaign, the DAM office, in consultation with the members of the Public Relations Working Group and scientists from DAM member institutions, is preparing short summaries of current research projects in the form of image series – known as sharepics – and short videos for use on social media channels. The images are also being bundled on the → *DAM website* The project and topic examples from everyday research illustrate the approaches taken by German marine research to address current societal challenges – as a contribution to a more sustainable use of coasts, seas and oceans.

The DAM has ended its involvement on X (formerly Twitter): As it became clear over the course of the year that it was becoming increasingly difficult to engage in fact-based, respectful and constructive exchange on topics related to marine research, the DAM's executive board, like many other scientific institutions, decided at the end of 2024 to deactivate its account on this platform.

ACTIVITIES IN COMMUNICATION AND DIALOG

Knowledge transfer through dialogue: the DAM's parliamentary evenings raise awareness of the concerns and activities of German marine research.

EVENTS

Organising and participating in events is an important means for the DAM to communicate its own tasks and goals and to raise awareness of the protection and sustainable use of coasts, seas and oceans – both in society in general and among politicians as a sub-target group. This paves the way for dialogue and networking with important target groups of the DAM and, in particular, for the provision of practical knowledge, a central component of the DAM's transfer activities (see page 27 f.). The core area of transfer and the field of action of science communication at the DAM are thus interlinked.

In 2024, the DAM expanded the political presentation round of the DAM in the northern German states of the previous two years with two parliamentary evenings. Two state evenings entitled 'Meer Zukunft' (More Future) on September 18 in Kiel and on October 21 in Bremen dealt with regionally relevant topics to which marine research can contribute current knowledge: In Kiel, the focus was on the future of the North Sea and Baltic Sea regions in the context of the conflict between protection and exploitation, while in Bremen the focus was on the challenges posed by new risks to coastal regions resulting from the consequences of man-made climate change. In addition to an information section with keynote speeches and panel discussions, in which marine researchers from various DAM member institutions and DAM research missions (see page 13) contributed their findings and scientific perspectives, the parliamentary evenings offered participants additional opportunities for exchange and networking with a subsequent 'get-together. In Bremen, the two transfer portals 'Meere Online' and 'Interaktiver Weltozean' were also officially launched (see page 28), as their finalisation coincided with the date of the parliamentary evening. Both parliamentary evenings were attended by high-ranking representatives from state politics and other stakeholders from business and civil society. The willingness of the guests to position themselves as advocates of the DAM, as well as the attendance figures of around one hundred people at each event, demonstrated the high value placed on scientific findings and the DAM as a source of scientific impetus in the political environment of the northern German federal states. A third parliamentary event at federal level was devoted to the discussion and communication of practical knowledge from research on the topic of 'Ammunition in the sea – science, pilot salvage and beyond?' (see page 30).

In addition to event formats specifically tailored to the political target group, the DAM addressed a broader audience interested in science in the reporting year with various event participations, including the Long Night of Science in Hamburg on April 27 and the Ocean Literacy Forum of the 8th International Ocean Film Festival Cinemare in Kiel from April 24 to 28.

The DAM's contributions to the multi-day marine film festival, which is unique in Europe, were made on the initiative of the German Ocean Decade Committee (ODK) in the context of the UN Ocean Decade, of which the DAM is a strategic partner.

At the boot yacht and water sports fair in January, Joachim Harms, Chairman of the German Marine Research Alliance (DAM), presented ways of treating coasts, seas and oceans sustainably in water sports as part of the 'Ocean Forum – love your ocean'. At the beginning of November, the DAM took part in Berlin Science Week with the motto 'Common Grounds'. With its contribution, the DAM used the combined knowledge of German marine research to examine common prejudices about the role of coasts, seas and oceans in our life on Earth. In a 'Deep Dive Forum', four scientists from AWI, FZK, Thünen Institute and ZMT gave insights into their research in short, entertaining presentations. Recordings of the presentations are available on the DAM YouTube channel. At the DAM stand, visitors also had the opportunity to deepen their knowledge of coasts, seas and oceans and learn about the transfer projects 'Interactive World Ocean' and the information portal 'Ocean Online' (see also 28). The exchange on site led to a concrete follow-up assignment: a few weeks later, the Interactive World Ocean was used at a Berlin primary school as part of a climate week moderated by the DAM office.As part of the Science Communication Forum held at Urania Berlin in December 2024, the DAM, together with Helmholtz SynCom and the Research Institute for Sustainability (RIFS), a strategic partner of the DAM, offered a workshop on the topic of 'Science in Parliament: How Scientists Support Political Debates.' The focus was on how scientific findings can be incorporated into parliamentary processes in a comprehensible, targeted and effective manner. Forty-two participants from the German science communication sector discussed formats, quality assurance and effectiveness in science-policy dialogue at four stations. The discussions provided impetus for future formats and collaborations. A → *report on the results* is available on the DAM website.

Research presented in an entertaining way: at science-related events, researchers from DAM member institutions provide insights into their work – and at the same time highlight the need to treat coasts, seas and oceans sustainably.

STRUCTURE, BODIES AND COMMITTEES

The tasks and objectives as well as the structure of the German Marine Research Alliance (DAM) are laid down in the administrative agreement that came into force on July 18, 2019. The DAM's statutes, which specify the purpose, tasks and structure of the non-profit association, were adopted on July 4, 2019.

According to its statutes, the purpose of the association is to promote science and research, which is achieved in particular by strengthening German marine research. The term 'marine research' encompasses the relevant disciplines of coastal, marine and polar research. Through joint action, the DAM aims to address the major future issues in marine research and provide practical knowledge for the sustainable management of the oceans for politics, business and civil society.

To achieve these goals, the DAM promotes networking and cooperation between leading German marine research institutions and relevant stakeholders from politics, business and civil society. To fulfil this purpose, the DAM has the following bodies in accordance with its statutes:

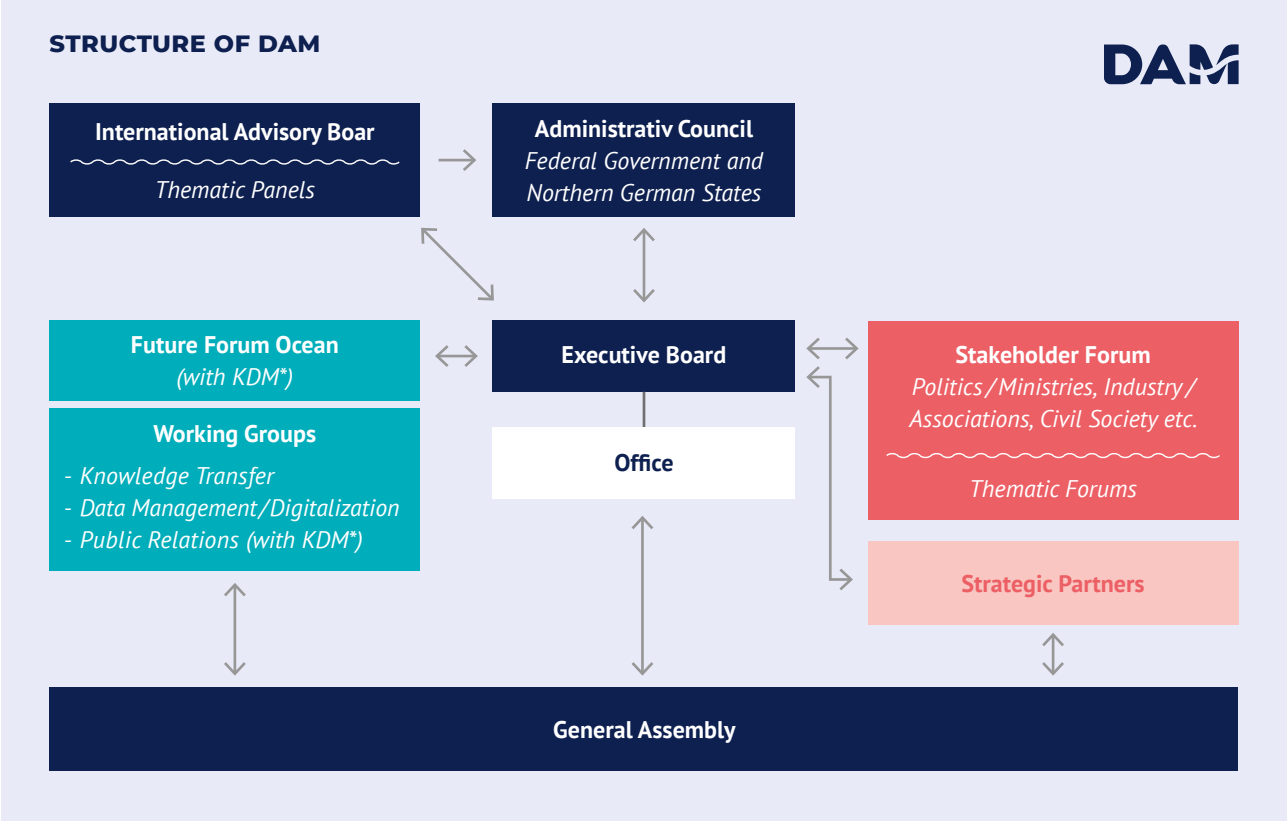
- **General Assembly,** which determines the principles governing the work of the German Marine Research Alliance,
- **Executive Board,** which manages the association and is responsible for the strategic and conceptual orientation of the DAM,
- **Administrative Council,** through which the federal government and the participating states are involved in the DAM's decision-making processes, and
- **International Advisory Board,** the independent scientific advisory body of the German Marine Research Alliance.

In addition, the following forums and committees were established in 2024:

- **Stakeholder Forum** for cooperation and exchange with politics, civil society, business and other stakeholders.
- **Working groups for data management and digitalisation, public relations and knowledge transfer:** Here, DAM member institutions exchange information on specific topics, pool their expertise and develop joint activities in their respective fields.
- **Future Forum Ocean:** The Future Forum Ocean (ZFO), based at the German Marine Research Consortium (KDM), is a joint forum of KDM and DAM with the aim of discussing and developing overarching scientific and research strategy topics in marine research.

The bodies, committees and forums of the DAM work in close coordination.

ACTIVITIES 2024



In addition to the activities of the individual core areas described in this report, one focus, as in previous years, was on further networking within the association. This included both internal cooperation between DAM member institutions and external cooperation and involvement of stakeholders from politics, science, business and civil society. The DAM has accepted a new associate member, the Lower Saxony State Agency for Water Management, Coastal Protection and Nature Conservation (NLWKN) (see page 43). Further supporters have also been gained for the Stakeholder Forum (see page 47). Details on the composition and work of the respective bodies and committees are provided in the following section.

In the reporting year, particular emphasis was placed on evaluating the DAM and, as in previous years, on measures to prepare for the planned merger of the German Marine Research Alliance (Deutsche Allianz Meeresforschung e.V.) and the German Marine Research Consortium (Konsortium Deutsche Meeresforschung e.V., KDM).

EVALUATION OF THE DAM

In order to review the effectiveness of its activities, an external strategic and structural evaluation of the DAM's activities in its core areas so far was carried out in 2024 in accordance with the administrative agreement. The evaluation results form the basis for the decision by the federal and state governments on the continuation, further development and possible permanent establishment of the DAM.

The DAM evaluation process officially began in early February 2024. The BMBF (BMFTR since May 2025) and the federal states jointly presented the international evaluation commission. The DAM Executive Board provided an overview of the DAM's work, which was further elaborated in another meeting at the end of February. In the following months, the DAM prepared overviews and documents for the evaluation commission, followed by further discussions with the commission and the Kienbaum Consultant office set up by the federal and state governments to support the commission. Kienbaum also conducted interviews with the federal and state governments as well as selected managers and researchers from DAM member institutions and research missions, the DAM Stakeholder Forum and the DAM International Advisory Board. The extremely positive evaluation results were published in spring 2025 (see page 2).

JOINT PERSPECTIVE OF DAM AND KDM

With DAM and KDM, there are currently two associations in Germany that were founded and operate with complementary tasks and objectives, but represent German marine research with a comparable focus and an almost identical membership structure. In order to combine the expertise and strengths of both associations and create synergies, the two organisations are to be merged into a joint association in the future and their activities bundled on the basis of their previous achievements and objectives. The aim is to strengthen German marine research nationally and internationally and to make it unmistakably perceived as a single entity – and thus as an even stronger voice as a source of knowledge for more sustainable management of coasts, seas and oceans.

The goals and tasks of the future association defined during the strategy days are set out in a strategy paper, which has been and will continue to be developed in an iterative process together with the members, the federal government and the states in the coming months, together with the members of DAM and KDM as well as the federal government and the states. The merger of the two associations is planned for spring 2026.

GENERAL ASSEMBLY

As the highest decision-making body of the DAM, the General Assembly (GA) determines the principles governing the work of the German Marine Research Alliance: it elects the Executive Board and the International Advisory Board, accepts the annual report and annual accounts submitted by the Executive Board after approval by the Administrative Council, and discharges the Executive Board on the recommendation of the Administrative Council. In accordance with Section 30 of the German Civil Code (BGB), the GA may appoint special representatives and assign them specific areas of responsibility. It also decides on all other tasks assigned to the General Assembly by law or elsewhere in the Articles of Association.

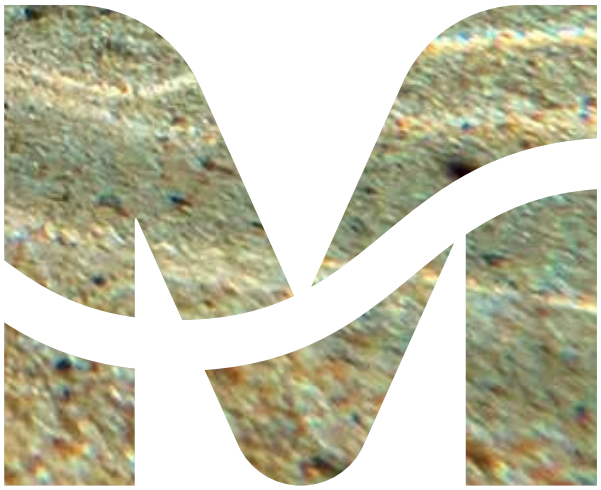
As of December 31, 2024, 25 leading German university and non-university marine research institutions have joined forces in the DAM to strengthen the sustainable management of coasts, seas and oceans: 18 full members and seven associate members. In addition, two strategic partners have joined, expanding the spectrum of marine research to include sustainability research.

The DAM member institutions investigate human-induced changes to ecosystems, the role of the ocean in climate change, its social and cultural consequences, and modern forms of marine use. Their common goal under the umbrella of the DAM is solution-oriented research to develop options for action for the sustainable management of coasts, seas and oceans. In the reporting year, the Lower Saxony State Agency for Water Management, Coastal Protection and Nature Conservation (NLWKN) joined the DAM as an associate member. With its internationally recognised expertise in coastal research and protection and its focus on sustainable coastal management, the NLWKN enriches the DAM and complements the thematic range of the DAM member institutions.

MEETINGS IN 2024

In 2024, a general meeting was held in Hamburg on September 10. This was supplemented by two strategy days in the spring, during which DAM and KDM members exchanged views on the prospects and planned merger of the two associations (see page 41).

In addition to the association's internal matters, the general meeting focused in particular on the admission of the NLWKN as a new associate member of the DAM and preparations for participation in the first National Marine Conference and the UN Ocean Conference in 2025. Other key topics included the evaluation of the DAM and the joint perspective of the DAM and KDM. After the members of the DAM and KDM had already expressed their intention to merge the two associations at the two strategy days in the spring, this was reiterated at the general meeting and the merger was expressly welcomedt.



THE DAM MEMBERS ONE BY ONE:

- **AWI** – Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research
- **CEN** – Center for Earth System Research and Sustainability, Universität Hamburg
- **Fraunhofer** – Fraunhofer Society for the Advancement of Applied Research
- **FZK** – Coastal Research Center of Leibniz University Hannover and Technische Universität Braunschweig
- **GEOMAR** Helmholtz Centre for Ocean Research Kiel
- **Hereon** – Helmholtz-Zentrum Hereon
- **ICBM** – Institute for Chemistry and Biology of the Marine Environment, Carl von Ossietzky Universität Oldenburg
- **IOW** – Leibniz Institute for Baltic Sea Research Warnemünde
- **KMS** – Kiel Marine Science, Kiel University
- **MARUM** – Center for Marine Environmental Sciences at the University of Bremen
- **MPI-M** – Max Planck Institute for Meteorology
- **MPI-MM** – Max Planck Institute for Marine Microbiology
- **MTS** – Department Maritime Systems, Universität Rostock
- **SAM** – Senckenberg am Meer, Senckenberg Society for Nature Research
- **THÜNEN** – Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries
- **TiHo** – University of Veterinary Medicine Hannover
- **UG** – University of Greifswald
- **ZMT** – Leibniz Centre for Tropical Marine Research

*Associated Members

- **BAW** – Federal Waterways and Engineering Research Institute
- **BGR** – Federal Institute for Geosciences and Natural Resources
- **BSH** – Federal Maritime and Hydrographic Agency
- **DMM** – German Oceanographic Museum, Stralsund
- **DSM** – German Maritime Museum – Leibniz Institute for Maritime History
- **NLWKN** – Lower Saxony State Agency for Water Management, Coastal Defence and Nature Conservation
- **UBA** – Federal Environment Agency

**Strategic Partners

- **IDOS** – German Institute of Development and Sustainability
- **RIFS** – (since January 2023 RIFS): Research Institute for Sustainability

EXECUTIVE BOARD

The DAM Executive Board in 2024
(from left to right): Joachim Harms, Katja Matthes,
Ulrich Bathmann, Michael Schulz.

The Executive Board manages the German Marine Research Alliance (Deutsche Allianz Meeresforschung e.V.), implements the joint objectives of the DAM on behalf of the General Assembly, and develops the strategic and conceptual orientation of the German Marine Research Alliance, which must be approved by the General Assembly and the Administrative Council. The members of the Executive Board are elected by the General Assembly for a period of four years.

As of 31 December 2024, the DAM Executive Board consisted of four members. Joachim Harms was the full-time Chairman of the Executive Board. Michael Schulz, Director of MARUM – Centre for Marine Environmental Sciences at the University of Bremen (until September 2024) / Professor of Geosystem Modelling (University of Bremen), served as Deputy Chairman. Katja Matthes, Director of GEOMAR Helmholtz Centre for Ocean Research Kiel, and Ulrich Bathmann, former Director of the Leibniz Institute for Baltic Sea Research Warnemünde (IOW) / Senior Professor for Earth System Research at the University of Rostock, were additional members of the Executive Board during the reporting year.

In 2024, the Executive Board met weekly with few exceptions, supplemented by joint meetings with the KDM Executive Board, which were usually held on a monthly basis. In two additional so-called 'open Executive Board meetings' in April and December, the DAM provided the heads of DAM member institutions and strategic partners, the DAM representatives and the spokespersons of the DAM research missions, as well as the KDM management, with an overview of current activities and offered the opportunity to discuss and prepare important strategic issues and decisions.

ADMINISTRATIVE COUNCIL

The Administrative Council involves the federal government and the participating federal states in the decision-making processes of the DAM. The Administrative Council monitors the work of the DAM and the Executive Board and decides on the implementation of projects in the core areas. The Administrative Council consists of six voting members, one of whom is appointed by the federal government – represented by the Federal Ministry of Education and Research (BMFTR) – and one by each of the northern German federal states. The member appointed by the federal government has as many votes as the participating states have in total. The Administrative Council decides by simple majority.

MEMBERS OF THE ADMINISTRATIVE COUNCIL

At the end of the reporting year, the following representatives of the funding bodies were members of the Administrative Council:

For the Federal Government (Chair):

- **Stefan Müller,** Head of the Department of 'Future Provision – Research for Fundamentals and Sustainable Development', Federal Ministry of Education and Research (BMBF, since May 2025 BMFTR)

For the federal states:

- **Rüdiger Eichel,** Head of the Department of 'Research, Innovation, Europe', Lower Saxony Ministry of Science and Culture
- **Dr. Rolf Greve,** Head of Office, Authority for 'Science, Research and Equality', Free and Hanseatic City of Hamburg
- **Friederike Kampschulte,** Head of the Department of 'Science', Ministry of 'General and Vocational Education, Science, Research and Culture' of the State of Schleswig-Holstein (MBWK)
- **Woldemar Venohr,** Head of the Department of 'Science and Research, Universities', Ministry of 'Science, Culture, Federal and European Affairs' of Mecklenburg-Western Pomerania (State Coordinator)
- **Kay Wenzel,** Head of the Department of Higher Education and Research, Senator for Science and Ports, Free Hanseatic City of Bremen

The Administrative Council held two regular meetings in 2024. In addition to regulatory matters and association affairs, reports from bodies and committees, and activities in DAM's core areas, the focus of both meetings was on the status of the DAM evaluation and the status and next steps regarding the merger of DAM and KDM. On February 20, 2024, an extraordinary online meeting of the Administrative Council was also held to review and approve continued funding for the DAM research mission sustainMare (see page 16). The Administrative Council approved continued funding, taking into account the recommendations of the International Advisory Board and external reviewers.

INTERNATIONAL ADVISORY BOARD

The members of the DAM International Advisory Board come from different countries and continents. From left to right: Sebastian Unger, Allison Schaao, Ulrich Bathmann (DAM Board Member), Kate Moran, Joachim Harms (DAM Chairman), Thorsten Blenckner, Petra Mahnke, Peter Schlosser.

The International Advisory Board is the independent scientific advisory body of the German Marine Research Alliance. It reviews and evaluates proposals for projects and activities in the core areas, as well as topic proposals and the implementation of the DAM's research missions.

In 2024, the International Advisory Board consisted of the following members:

- **Prof. Dr. Peter Schlosser,** Chair (Arizona State University, USA)
- **Assoc. Prof. Dr. Thorsten Blenckner** (Stockholm University, Sweden)
- **Dieter Janecek** (Federal Government Coordinator for Maritime Economy and Tourism, Federal Ministry for Economic Affairs and Climate Protection (until May 2025))
- **Petra Mahnke** (Managing Director and Chair of the Society for Maritime Technology, Germany)
- **Prof. Dr. Kate Moran** (University of Victoria and CEO of Ocean Networks, Canada)
- **Prof. Dr. Nadia Pinardi** (University of Bologna, Italy)
- **Prof. Dr. Katherine Richardson** (University of Copenhagen, Denmark)
- **Dr. Allison Schaap** (National Oceanography Centre, United Kingdom)
- **Prof. Dr. Stefan Schouten** (NIOZ – Royal Netherlands Institute for Sea Research, Netherlands)
- **Sebastian Unger** (Marine Affairs Officer of the German Federal Government, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, *until May 2025*)

The International Advisory Board met online in February 2024 and in person in Berlin at the end of May. The online meeting focused on the recently launched mareXtreme research mission (see page 17) and the follow-up funding for the sustainMare mission. The Advisory Board's recommendations were submitted to the Administrative Council (see page 45). At the face-to-face meeting in May, the DAM provided information about its current activities. As with all meetings of the DAM bodies in 2024, the focus was on the evaluation of the DAM and the status of the planned merger with KDM. The Advisory Board emphasised the added value of the DAM, in particular its role as a platform for exchange between science, politics, industry and society. A merger with KDM was seen as an opportunity to further strengthen German marine research and its international visibility.

STAKEHOLDER FORUM

The DAM Stakeholder Forum is an independent advisory body comprising around 30 representatives from politics, business and civil society. It serves as an important sounding board and source of inspiration for the DAM. Its members play a particularly important role in identifying socially relevant topics for current and future DAM research missions.

MEMBERS OF THE STAKEHOLDER FORUM

The DAM has secured the participation of the following individuals, institutions and organisations in the Stakeholder Forum until the end of 2024:

Politics/Federal Government

- **Federal Ministry of Education and Research (BMBF, since May 2025 BMFTR),** Ministerial Councillor Dr. Zage Kaculevski
- **Federal Ministry of Digital and Transport (BMDV),** Achim Wehrmann
- **Federal Ministry of Food and Agriculture (BMEL, since May 2025 BMLEH),** Dr. Hermann Pott
- **Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV),** Government Director Ilka Wagner
- **Federal Ministry of Defence (BMVg),** Senior Technical Government Director Dr. Uwe Kretschmer
- **Federal Ministry for Economic Affairs and Climate Protection (BMWK, since May 2025 BMWE),** Ministerial Councillor Dr. Anja Stenger (from 02/2023)
- **Federal Ministry for Economic Cooperation and Development (BMZ),** Jan Weinreich

Politics/North German states

- **Authority for Science, Research, Equality and Districts, Free Hanseatic City of Hamburg,** State Councillor Dr Eva Gümbel
- **Senator for Environment, Climate and Science Bremen (SWH),** State Councillor Irene Strebl
- **Ministry of Education, Science and Culture, Federal and European Affairs of the State of Mecklenburg-Western Pomerania,** State Secretary Susanne Bowen
- **Ministry of Education, Science and Culture of the State of Schleswig-Holstein,** State Secretary Guido Wend
- **Lower Saxony Ministry of Science and Culture,** State Secretary Prof. Dr. Joachim Schachtner

Economy/Associations

- **German Fisheries Association (DFV),** Peter Breckling
- **German Maritime Centre (DMZ),** Claus Brandt
- **Society for Maritime Technology (GMT),** Petra Mahnke
- **German Engineering Federation (VDMA),** Alexandra Dreyer

Authorities/Technical Sciences

- **Curatorium for Research in Coastal Engineering (KFKI),** Prof. Dr. Frank Thorenz

Civil Society/Non-Governmental Organisations and Foundations

- **Bread for the World,** Francisco Marí
- **German Association for the Environment and Nature Conservation (BUND),** Nadja Ziebarth
- **German Society for Marine Research (DGM),** Prof. Dr. Hanelt
- **German Ocean Foundation,** Frank Schweikert
- **Fair Oceans,** Kai Kaschinski
- **FUTURZWEI. Foundation for Sustainability,** Dana Giesecke
- **Greenpeace Germany,** Sandra Schöttner
- **Nature and Biodiversity Conservation Union (NABU),** Dr. Kim Detloff
- **World Wide Fund For Nature (WWF) Germany,** Heike Vesper

European level

- **Joint Programming Initiative Oceans (JPI Oceans),** Dr. Thorsten Kiefer
- **Mission Board for Healthy Oceans, Seas, Coastal and Inland Waters,** Gesine Meißner, former Member of the European Parliament (appointed ad personam)

Others

- **International Conference for YOUNG Marine Researchers (ICYMARE),** Dr. Viola Liebich
- **Science in Dialogue (WID),** Markus Weißkopf

Looking at marine issues from different angles: representatives from federal and state politics, business and organised civil society contribute their perspectives in the DAM's stakeholder forum.

MEETINGS IN 2024

Two meetings of the Stakeholder Forum were held in 2024. At the April meeting, the new DAM research mission mareXtreme (see page 17) was presented by two of the three mission spokespersons. In addition, the BMUV and BMBF (since May 2025 BMUKN and BMFTR) provided an overview of the status of the 2025 National Marine Conference and the EU mission 'Restoring our oceans and waters'. The members of the Stakeholder Forum then discussed how marine research could be more closely integrated into parliamentary processes and how the involvement of stakeholders, which is central to the DAM, could be further strengthened. In October, the focus was on international marine policy, in particular the status of planning and opportunities for participation in the 2025 UN Ocean Conference. In addition, discussions were held on how cooperation between marine research and industry could be deepened.

OFFICE

According to the statutes, the members of the administrative office support the Executive Board in fulfilling its tasks. In 2024, a total of twelve people were employed at the DAM administrative office, five of whom worked part-time. In addition, there is the Chairman of the Executive Board:

- **Chairman of the Board**
  Dr. Joachim Harms
- **Managing Director and Head of Core Area Research**
  Dr. Annekatrin Lehmann
- **Core Area Transfer**
  Dr. Ute Wilhelmsen (Head)

  Julia Jung, Project Coordination Weltozean (part-time, until 07/2024) (third-party funded project)

  Beatriz Heigl, Project Coordination Weltozean (part-time from 08/2024) (third-party funded project)

  Kristina Klesse, Online Editor, Transfer Portals (from 08/2024) (third-party funded project)

  Dr. Swantje Preuschmann, Project Coordination, Information Portal (third-party funded project)

  Dr. Carolin Müller, Editorial Team, Information Portal (part-time from 09/2024) (third-party funded project)
- **Core area: Data management and digitisation**
  Dr. Gauvain Wiemer (Head)
- **Communication/Political communication**
  Marion Jüstel (part-time)
  Paulina Conrad (part-time, from 03/2024)
- **Administration**
  Sebastian Konitzer
- **Team Assistant**
  Stephanie Uibel

The DAM office received student support from Rike Jähnichen and Emilia Kilbert, as well as from Adrian Schirra for the transfer third-party funded projects.

The team of the DAM office at the end of 2024 (from left to right): Beatriz Heigl, Sebastian Konitzer, Stephanie Uibel, Paulina Conrad, Swantje Preuschmann, Ute Wilhelmsen, Joachim Harms, Marion Jüstel, Gauvain Wiemer, Kristina Klesse, Annekatrin Lehmann

FIGURES

The German Marine Research Alliance is a registered non-profit association. It is funded by the federal government, represented by the Federal Ministry of Research, Technology and Space (BMFTR), and the five northern German states. In addition, membership fees are collected from DAM members in accordance with the statutes.

INCOME & EXPENDITURE

To carry out its statutory tasks in the 2024 financial year, the DAM office received € 1,104,783 in grants from the northern German federal states and € 135,000 in income from membership fees.

Total expenditure amounted to € 1,230,855.

REVENUES

Income from federal states	1,104,783 €
Income from membership fees	135,000 €
Total income	**1,239,783 €**

EXPENDITURE

Personnel expenses	722,748 €
Expenditure on administration & operations	194,988 €
Operating expenses	305,478 €
Expenditure on investments	7,641 €
Total expenditure	**1,230,855 €**

In addition, designated third-party funds amounting to € 607,786 were allocated for the implementation of the two transfer projects (see page 28).

The DAM budget is subject to the principle of annuality, meaning that unused funds are returned to the funding bodies or offset against the following year's budget. The annual accounts are audited by an independent auditing firm. The funding bodies verify that the funds have been used appropriately.

ANNUAL OVERVIEW 2024

- Meetings and informative offers of the DAM bodies and committees
- DAM events and activities

FEBRUARY 8
International Advisory Board meeting

FEBRUARY 12
Information event for the scientific community

01

JANUARY 01
The **third DAM research mission** begins with the start of the year: Under the short title **mareXtreme**, around 150 scientists are researching strategies for dealing with marine extreme events and natural hazards – thus addressing highly topical research topics that are relevant to society.

JANUARY 01
Five years after the founding of **the DAM, the DAM evaluation process** begins: over the coming months, an external evaluation commission will review the strategic and structural effectiveness of the DAM. The evaluation results will form the basis for the federal and state governments' decision on the continuation, further development and possible perpetuation of the DAM.

JANUARY 15
Full steam ahead for the **UN Decade of Ocean Science:** Fifteen new members and ambassadors begin their voluntary work for the German Committee for the UN Decade of Ocean Science (ODK) – including DAM Transfer Manager Ute Wilhelmsen, who, as a member of the ODK Executive Board, will co-chair the Education and Society Working Group.

02

FEBRUARY 29
Marine knowledge for your ears: In the **podcast series 'Exploring the Seas'** by DAM member Gesellschaft für Maritime Technik (GMT), representatives of the DAM and its research missions explain the importance of marine research for sustainable management of the oceans.

03

MARCH 15
At the first **strategy day of DAM and KDM**, the plans, goals and content of a future joint association for German marine research are specified. The members of both associations give their executive boards a clear mandate to press ahead with their further merger.

MARCH 19
Launch of the cross-party and cross-departmental **parliamentary group on marine policy** in the German Bundestag. Representatives from the field of marine research contribute their latest knowledge and ideas for the effective protection and sustainable use of the North Sea and Baltic Sea.

APRIL 22
Open board meeting

APRIL 30
Stakeholder forum

04

APRIL 24 AND 27
At the **Cinemare Film Festival in Kiel** and the **Long Night of Museums in Hamburg**, the DAM presents its educational projects 'Interactive World Ocean' and the digital information portal 'Meere Online' to a wider audience for the first time. The feedback will be incorporated into the further development of the portals.

MAY 6
Second DAM-KDM Strategy Day

MAY 30
International Advisory Board Meeting

05

MAY 22
At the **annual meeting of the 'Underway' research data project**, the focus is on preparing for a possible continuation phase of the project: The project partners discuss cross-institutional progress in providing FAIR research data and concrete measures for further improving the data infrastructure.

MAY 23
At a joint strategy **meeting between the federal government, the northern German states and the executive boards of DAM and KDM**, participants discuss the plans developed at the strategy days of both associations regarding the goals and tasks of the future joint association of German marine research.

JUNE 17
Information event for the scientific community

06

JUNE 10
The s**econd round of the NFDI4Earth Academy**, a two-year training programme for young scientists on the subject of data science, jointly offered by Geo.X, Geoverbund ABC/J and the DAM, begins with a three-day kick-off meeting.

JUNE 18
At a **political event organised by the German Offshore Wind Energy Association (BWO) and the Federal Ministry for the Environment**, participants from politics, administration, business, science and organised civil society discuss the possibilities and limitations of environmentally compatible expansion of offshore wind energy. The DAM and six of its member institutions contribute ideas and findings from research.

2024

10. SEPTEMBER
General meeting

07

JULY 3

At a **joint political evening event**, researchers from the DAM research mission **CDRmare** and the **CDRterra** research network present to stakeholders from politics and practice how long-term measures for carbon dioxide capture and storage on land and at sea can contribute to climate neutrality.

08

AUGUST 01

The **DAM research mission CDRmare enters phase II**. Among other things, a new feature is the establishment of an integrative 'Social Sciences and Humanities Hub' for even stronger interdisciplinary work on overarching humanities and social science issues relating to marine CDR and CCS.

09

SEPTEMBER 10

The DAM welcomes its **25th member: The Lower Saxony State Agency for Water Management, Coastal Protection and Nature Conservation** (NLWKN) joins as an associate member, contributing its expertise on the protection and use of coastal waters to the range of topics covered by DAM member institutions.

SEPTEMBER 18

'Scientific findings are invaluable for political decisions because they offer reliability and create trust,' was the conclusion of the **parliamentary evening**, which took place in Kiel for the second time after almost two years of DAM presentations to parliamentarians from the northern German states. The focus was on the future of the North Sea and Baltic Sea region in the conflict between protection and use.

OCTOBER 16
Stakeholder Forum

10

OCTOBER 22
Marine knowledge times two: At the parliamentary evening in Bremen on the topic of 'Oceans under climate change: challenges posed by new risks for coastal regions', the two transfer portals of the DAM – the virtual ocean map 'Interactive World Ocean' and the information portal 'Ocean Online' – are officially launched and invite interested parties to dive in and explore.

11

NOVEMBER 01
DAM presents its activities at **Science Week Berlin:** Under the motto 'Common Ground,' four researchers from DAM member institutions, moderated by DAM Managing Director Annekatrin Lehmann, provide insights into their research in short, entertaining presentations.

NOVEMBER 26
Research and cooperation for systematic munitions clearance in the North Sea and Baltic Sea: At the dialogue event 'Munitions in the Sea – Science, Pilot Salvage and the Way Forward', the DAM, sustainMare and NABU bring politics, science, nature conservation and business into dialogue.

DECEMBER 16
Open board meeting

12

DECEMBER 16
As the second DAM research mission this year, sustainMare is entering phase II. The goal remains to develop and evaluate measures that combine sustainable use with the protection of the oceans. The **Mission Working Groups** play a special role, addressing cross-project topics such as fisheries, marine protected areas and multiple use.

DECEMBER 12
How can practical knowledge be incorporated into politics? Together with Helmholtz SynCom and the Research Institute for Sustainability (RIFS), DAM is offering the **workshop 'Science in Parliament: How Scientists Support Political Debates'** at the Science Communication Forum.

2024

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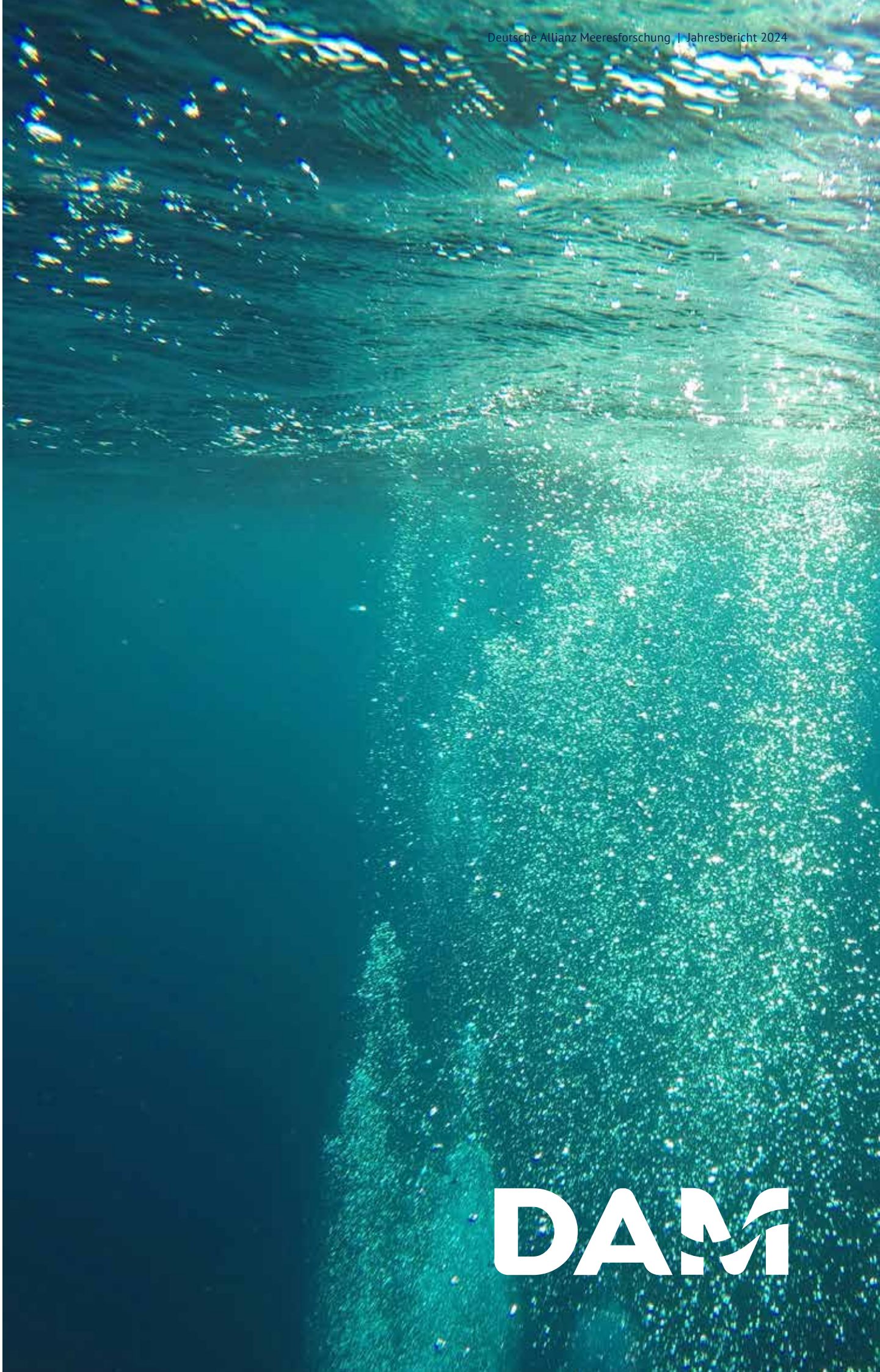

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